
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Basavaiah et al.

Attorney Docket No.: ANDIP037/425584

Application No.: 10/726,269

Examiner: Unelus, Ernest

Filed: December 1, 2003

Group: 2181

Title: APPARATUS AND METHOD FOR
PERFORMING FAST FIBRE CHANNEL
WRITE OPERATIONS OVER RELATIVELY
HIGH LATENCY NETWORKS

Confirmation No.: 3368

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Signed: /Chereyce Brown/
Chereyce Brown

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Applicant requests review of the final rejection in the above-identified application.

This request is being filed with a Notice of Appeal.

The review is requested for the reasons stated on the attached sheets.

Remarks begin on page 2 of this paper.

REMARKS

Claims 1-3, 5-20, and 24-31 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Mullendore (US 2003/018514) in view of Beukema (USP 6,978,300). Applicant respectfully traverses these rejections below.

It is important to note that the rejections set forth in the Office Action mailed June 27, 2008 do not reflect the claim language as most recently amended. Rather, it appears that the Examiner merely copied the prior rejections, even though they do not pertain to the currently pending claims. In the Office Action, the Examiner re-iterates the rejections of the claims from the prior Office Action, regardless of the fact that the “rejected language” is no longer recited in the pending claims, as submitted in the most recent amendment, Amendment C. For instance, with respect to recently added claim 30, on page 13 of the Office Action, the Examiner discusses the claim language “initializing either the OX_ID or RX_ID of the write command header”...even though this language is not present in claim 30 (or the other claims). As another example, on page 13 of the Office Action, with respect to claims 24, 27, 29, and 30, the Examiner discusses the claim language “wherein the transfer ready command received from the target is suppressed,” even though this language is not present in the claims.

The Examiner has also failed to address the claim language that was recently added to the claims. For instance, claim 1, as recently amended, recites “wherein the processor is further configured to initialize a receiver exchange identifier (RX ID) of a transfer ready command with the value and send a the transfer ready command frame to the initiating Host before receiving the a transfer ready command from the target.” The Examiner appears to discuss the RX_ID of the write command (which is no longer recited in the pending claims), but does not address the initialization of the RX_ID of a transfer ready command. As such, Applicant respectfully asserts that the rejections of the pending claims are improper.

Claim 1 recites an apparatus configured to “initialize a receiver exchange identifier (RX ID) of a transfer ready command with the value and send a the transfer ready command frame to the initiating Host before receiving the a transfer ready command from the target.”

Claims 24 and 27 similarly recite “sending a transfer ready command including the initialized RX_ID value to the host prior to receiving a transfer ready command from the target, wherein sending the transfer ready command to the host allows the switch to operate as a proxy for the target.” Neither reference either alone or combination teaches or suggests these recitations. The Examiner may attempt to argue that Mullendore describes these recitations. In fact, on page 5 of the recent Office Action, the Examiner appears to discuss the initialization of the RX_ID of the write command, not the transfer ready command. As such, Applicant respectfully asserts the Examiner has failed to make out a prima facie case of obviousness.

Mullendore does send transfer ready commands to an initiator. However, these transfer ready commands are sent either after a transfer ready command is received from the target or are sent in absence of a transfer ready command from the target. For example, Figures 5, 6, 11, and 12 show a switch sending the transfer ready command to the host after the transfer ready command is received from the target. Figures 4 and 7 show a switch sending the transfer ready command to the host in absence of a transfer ready command from the target. In other words, the switch sending the transfer ready command to the host in these figures never receives the transfer ready command from the target. None of these Figures show a transfer ready command sent to the host before a transfer ready command is received from the target.

Independent claim 1 also recites an apparatus configured to process the trapped write command by “modifying the (OX_ID) of the write command header to include a value; wherein the processor is further configured to initialize a receiver exchange identifier (RX_ID) of a transfer ready command with the value and send a the transfer ready command frame to the initiating Host before receiving the a transfer ready command from the target;” Independent claims 24 and 27 recite “initializing the receiver exchange identifier (RX_ID) value to generate an initialized RX_ID value,” “sending the transfer ready command including the initialized RX_ID value,” “modifying the originator exchange identifier (OX_ID) of the write command to include the initialized RX_ID value to generate a modified write command,” and “forwarding the modified write command to the target.”

The Examiner notes that Mullendore does not teach or suggest “a frame having a header with an OX_ID or RX_ID” and does not modify or initialize either the OX_ID or RX_ID of the write command header, or of the transfer ready command, as claimed. The Examiner relies on Beukema to teach or suggest this recitation. The Examiner argues that Beukema states that routers routinely modify packet network headers and that the network header includes routing information such as the destination IP address and other network routing information. However, Applicant respectfully asserts that none of the cited references discloses or suggests modifying the OX_ID of the write command header or initializing the RX_ID of a transfer ready command in the manner claimed.

The Applicants’ Representative respectfully submits that modifying a network header “when the packet crosses a subnet boundary” (column 11, lines 36-38) is not modifying an OX_ID or an RX_ID in a frame. According to various embodiments, the OX_ID and RX_ID values are separate from source and destination addresses that the Examiner argues are the OX_ID and RX_ID. Specifically, the apparatus (e.g., switch) modifies the OX_ID of the write command so that the apparatus can operate as a proxy originator for the exchange, while the apparatus (e.g., switch) initializes the RX_ID of a transfer ready command so that the apparatus can operate as a proxy responder for the exchange. If the techniques of the pending claims were to simply modify the source and destination addresses, the write command would be misrouted. As such, Applicant respectfully asserts that the combination of the cited references would fail to achieve the desired result.

Various independent claims also recite “initializing” the RX_ID of a transfer ready command. It is true that some routers will sometimes change source and destination addresses at subnet boundaries as Beukema states. However, even if these source and destination addresses are properly interpreted to be OX_ID and RX_ID values, Beukema still does not initialize source and/or destination addresses at a switch. Applicant respectfully asserts that initialization is not the same as modification, contrary to the Examiner’s interpretation. Rather, initialization is performed to set an initial value to one that is initialized. If a source and destination address in Beukema were transmitted uninitialized to a switch, the switch would not know what to do with the uninitialized value and it would lead to error and improper network operation. By contrast, the independent claims recite initializing an RX_ID value. The initialized value may then be sent to the host in a transfer ready command. Applicant respectfully asserts Mullendore and/or Beukema fail to disclose or suggest the recitations noted above, but these recitations are not taught or suggested by the

cited references and cannot be assumed. On page 5 of the recent Office Action, the Examiner appears to discuss the modification of the RX_ID of the write command, not the initialization of the RX_ID of a transfer ready command.

It is also important to note that by modifying the OX_ID of a write command header and/or initializing the RX_ID of a transfer ready command, an intercepting switch may track exchanges. The cited references fail to disclose or suggest such advantages. In addition, the cited references neither disclose nor suggest that an apparatus might need to track such exchanges in order to manage data transfers where transfer ready commands have been sent to the host before a transfer ready command has been received from the target. Thus, the pending claims achieve numerous advantages over the cited art.

Based on the foregoing, it is submitted that the independent claims are patentable over the cited references. In addition, it is submitted that the dependent claims are also patentable for at least the same reasons. For example, the limitations as recited in dependent claims 17 and 18 are not shown or suggested in either of the cited references, separately or in combination. The additional limitations recited in the independent claims or the dependent claims are not further-discussed as the above-discussed limitations are clearly sufficient to distinguish the claimed invention from the cited references. Thus, it is respectfully requested that the Examiner withdraw the rejection of the claims under 35 USC §103.

Respectfully submitted,

Weaver Austin Villeneuve & Sampson LLP

/Elise R. Heilbrunn/
Elise R. Heilbrunn
Reg. No. 42,649

Weaver Austin Villeneuve & Sampson LLP
P.O. Box 70250
Oakland, CA 94612-0250

Tel: (510) 663-1100